

EXHIBIT 49

Redacted Excerpts from the First Deposition of Dr. Hal Singer

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEVADA

- - -

IN RE: : Civil Action
: DOCKET NO.
CUNG LE, NATHAN QUARRY, : 2:15-cv-01045-RFB-
JON FITCH, BRANDON VERA, : (PAL)
LUIS JAVIER VAZQUEZ and :
KYLE KINGSBURG, on behalf : CLASS ACTION
of themselves and all :
others similarly :
situated, :
:
Plaintiffs, :
:
v. :
:
ZUFFA, LLC, d/b/a :
ULTIMATE FIGHTING :
CHAMPIONSHIP and UFC, :
:
Defendants. :

- - -

Wednesday, September 27, 2017

- - -

Videotaped deposition of
HAL J. SINGER, Ph.D., taken pursuant to
notice, was held at the law offices of
Berger & Montague, P.C., 1622 Locust
Street, Philadelphia, Pennsylvania 19103,
beginning at 9:24 AM, on the above date,
before Constance S. Kent, a Certified
Court Reporter, Registered Professional
Reporter, Certified LiveNote Reporter, and
Notary Public in and for the Commonwealth
of Pennsylvania.

* * *

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<p>1 (Exhibit No. Singer-1, 2 Expert Report of Hal J. Singer, 3 Ph.D., No. Singer-2, Errata, and 4 No. Singer-3, Errata II, were 5 marked for identification.) 6 THE VIDEOGRAPHER: We are 7 now on the record. 8 This begins videotape No. 1 9 in the deposition of Hal J. Singer 10 in the matter of Cung Le versus 11 Zuffa, LLC, in the US District 12 Court for the District of Nevada. 13 Today is Wednesday, 14 September 27th, 2017, and the time 15 is 9:24 AM. 16 This deposition is being 17 taken at 1622 Locust Street in 18 Philadelphia, PA 19103 at the 19 request of Boies, Schiller & 20 Flexner, LLP. 21 The videographer is Sol Tran 22 of Magna Legal Services, and the 23 court reporter is Connie Kent of 24 Magna Legal Services.</p>	<p>1 Flexner also for defendant Zuffa. 2 MR. CRAMER: And on the 3 phone is Augie -- 4 THE WITNESS: Augie Urschel. 5 MR. CRAMER: Augie Urschel 6 from Economists, Inc.? 7 THE WITNESS: Correct. 8 MR. CRAMER: You can spell 9 his name for the court reporter. 10 THE WITNESS: I don't know. 11 Maybe Augie can spell his last 12 name, Urschel. 13 MR. URSCHER: U-R-S-C-H-E-L. 14 THE WITNESS: Thanks, Augie. 15 THE VIDEOGRAPHER: All 16 right. Will the court reporter 17 please swear in the witness. 18 HAL SINGER, having been 19 first duly sworn, was examined and 20 testified as follows: 21 - - - 22 E X A M I N A T I O N 23 - - - 24 BY MR. ISAACSON:</p>
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<p>1 Will counsel and all parties 2 present, please state their 3 appearances and whom they 4 represent. 5 MR. CRAMER: Eric Cramer 6 from Berger & Montague for the 7 plaintiffs. 8 MR. DAVIS: Joshua Davis on 9 behalf the Saveri Law Firm for 10 plaintiffs. 11 MR. SILVERMAN: Dan 12 Silverman, Cohen Milstein Sellers 13 & Toll, on behalf of plaintiffs. 14 MR. SUTER: Mark Suter, 15 Berger & Montague, on behalf of 16 the plaintiffs. 17 MR. ISAACSON: Bill 18 Isaacson, Boies, Schiller & 19 Flexner for defendant Zuffa. 20 MR. WIDNELL: Nicholas 21 Widnell, Boies, Schiller & 22 Flexner, for defendant Zuffa. 23 MR. NAKAMURA: Brent 24 Nakamura, Boies, Schiller &</p>	<p>1 Q. So Dr. Singer, for ease of 2 reference, we're putting in front of you 3 Exhibits 1, 2 and 3. Exhibit 1 is your 4 report, Exhibit 2 is your first errata 5 and Exhibit 3 is your second errata. And 6 I'll be asking questions about those two 7 today, and if -- when you want to refer 8 to them, I wanted to make sure you had 9 them in front of you. 10 A. Okay. 11 Q. All right. Now, I'm going 12 to ask you hopefully some detailed 13 questions about the various models that 14 you've -- that are included in your 15 report, but let me just ask you some high 16 level questions to make sure I understand 17 what models you have in -- in the report. 18 Now, for purposes of 19 damages, your first two damages models 20 are benchmark -- benchmarks against 21 Strikeforce and Bellator based on the 22 percentage of revenue paid to fighters; 23 is that correct? 24 A. That is correct.</p>

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Q. Okay. And those -- those models don't include any explanatory variables, they're a simple comparison of the percentage of revenues between firms?

A. I wouldn't put it that way. They are a comparison of fighter wage shares across the two firms.

Q. Right.

A. You said revenues.

Q. You're correct, I misspoke. So thank you.

They are -- they don't include any other explanatory variables, they're just a comparison of the percentage of revenue paid to fighters between firms?

A. Well, these -- these are benchmarks and -- and I think by the construction of a benchmark, as opposed to, say, a regression model, which I've also included, these particular damages models don't control for variables -- other variables in the same way that a regression model might.

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Q. Okay. Then your next damage model is a regression model, and that shows the relationship -- attempts to show the relationship between Zuffa's foreclosure share and its own percentage of revenue shared with fighters.

Do I have that right?

A. Controlling for all other things that could explain variations in Zuffa's fighter wage share, yes.

Q. Okay. And that model assumes that challenged conduct in this case, as you've defined it in your report, caused the foreclosure.

A. No, I'm -- no, that's not correct.

Q. Okay. Does it assume that -- well, what caused the foreclosure other than the challenged conduct?

MR. CRAMER: Form.

THE WITNESS: Can I have that question back?

(Pertinent portion of the record is read.)

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MR. CRAMER: Misstates the testimony, foundation, form.

THE WITNESS: I believe the challenged conduct is the -- is the cause of the foreclosure share, that's correct.

BY MR. ISAACSON:

Q. Okay. And for foreclosure in your regression, you used what -- what you called the tracked fighters foreclosure measure; is that right?

A. Are you speaking of the regression in the damages section?

Q. Well, I think you've used it for several different things, but your foreclosure regression, and maybe if you want to look at Table 6 of your report, page 125.

A. Sorry, the page?

Q. 125.

A. Okay.

Q. Now, Table 6 on page 125 is the output of your foreclosure regression, correct?

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A. It is the output of one regression specification that appears in a different section of the report, correct.

Q. Okay. But it is an output of your foreclosure regression, correct?

A. I wouldn't put it -- I would put it -- just to be -- just to clarify what this is, it is the output of the regression of one specification of the regression that I ran in the anticompetitive effects section of the report. I just want to make sure that we don't conflate anticompetitive effects with damages.

Q. And I'm not trying to. I understand that this then gets used in damages. I'll take that next step. But let's give it a shorthand name?

A. Okay.

Q. Can we call it your foreclosure regression or -- and this would be one output because it's what -- the result of one specification, one

Page 14	Page 16
<p>1 output of your foreclosure regression. 2 A. If you want to call it the 3 foreclosure regression, I think that I'll 4 go with that. 5 Q. Okay. And by the 6 foreclosure regression, I mean, the 7 regression where you -- where you say 8 that you are showing that the -- when 9 there's an increase in share of 10 foreclosure, there's a decrease in share 11 of revenue paid to fighters. 12 A. Can I hear that back? 13 (Pertinent portion of the 14 record is read.) 15 THE WITNESS: The regression 16 shows that when controlling for 17 all other things that could 18 explain variations in fighter wage 19 shares, that the higher 20 foreclosure is causing lower 21 fighter wage shares, yes. 22 BY MR. ISAACSON: 23 Q. All right. And when you 24 use -- and you use -- you have three</p>	<p>1 MR. CRAMER: Objection to 2 form. 3 THE WITNESS: You're going 4 to have to show me where -- 5 BY MR. ISAACSON: 6 Q. Sure. The -- if you look 7 at -- so just look at page 162 of your 8 report. 9 A. Okay. 10 Q. Section A on page 162 has 11 paragraphs 247 and 248. That's 12 discussing the Strikeforce and Bellator 13 benchmarks we've discussed, correct? 14 A. Correct. 15 Q. And then Section B on the 16 next page, page 163, paragraphs 249 and 17 250, that discusses the foreclosure 18 benchmark that we just discussed, 19 correct? 20 A. It is -- it is certainly 21 related to the one that we just 22 discussed, but it is not identical. 23 Q. Well, for purposes of 24 damages, you -- let's just make sure I</p>
Page 15	Page 17
<p>1 columns in Table 6, Tracked, Ranked, 2 Headliner. 3 Do you see that? 4 A. Column 6 of, sorry? 5 Q. Table 6. 6 A. Oh, Table 6. 7 Q. The table you've been 8 looking at. 9 A. Yes. 10 Q. You see you have three 11 columns, Tracked, Ranked, Headliner? 12 A. Yes. 13 Q. When you -- when you 14 calculate damages using Zuffa's 15 foreclosure share, you rely on that first 16 column, right, tracked fighters? 17 A. Correct. 18 Q. And then the next damages 19 model you have, I think you called it 20 impact regression model for damages. 21 That -- that's where you take your model 22 for -- one of your models for showing 23 common impact and use that to reach a 24 damages result, correct?</p>	<p>1 have this right. For purposes of 2 estimating damages for the foreclosure 3 regression benchmark, what you did was 4 look at the statistical relationship 5 between Zuffa's foreclosure share and the 6 fighters' shares, the share revenue of to 7 fighters over time, correct? 8 A. Correct. 9 Q. And for -- in looking at the 10 statistical relationship between Zuffa's 11 foreclosure share, for that foreclosure 12 share, you used the regression that we 13 saw in Table 6? 14 A. No, that's incorrect. 15 Q. Okay. Explain to me why 16 that's incorrect? 17 A. As I -- as I explained in 18 Section B, I made a variation to the 19 model. 20 Q. Yeah, you're absolutely 21 right. So let me ask -- rephrase the 22 question here. 23 A. Okay. 24 Q. I think -- so for looking at</p>

<p style="text-align: right;">Page 18</p> <p>1 Zuffa's foreclosure share, you used the 2 regression in Table 6 but you made an 3 adjustment and you removed data points 4 for Strikeforce prior to its acquisition 5 by Zuffa? 6 A. Correct. 7 Q. Okay. Thank you. 8 Then your next damages 9 model, which is on the next page, page 10 164. 11 A. Yes. 12 Q. Impact regression model 13 benchmark. The -- here you also use 14 the -- in this benchmark -- in this 15 analysis, you are also examining the 16 statistical relationship between the 17 Zuffa foreclosure share and the fighters' 18 share, the share of revenues to fighters 19 over time, correct? 20 A. Are we looking at Table 10? 21 Q. This would actually, I 22 think, tie to Table 11. 23 MR. CRAMER: 11. 24 THE WITNESS: Okay.</p>	<p style="text-align: right;">Page 20</p> <p>1 I think that my prior answer 2 was correct, but it wasn't -- it wasn't 3 precise, and I just want to be precise 4 about what it's capturing. 5 It is -- it is capturing 6 the -- 7 Q. When you say "it," you're 8 talking about the foreclosure? 9 A. The foreclosure share 10 measure. 11 Q. Okay. 12 A. Right. And how it relates 13 to the challenged conduct. I think that 14 the answer I gave you might create the 15 impression that all aspects of the 16 challenged conduct were being captured 17 by -- by the foreclosure variable, and I 18 just want to make it -- it clear that 19 there are only certain aspects of the 20 challenged conduct that are being 21 captured by the foreclosure variable, and 22 in that sense, the model is conservative 23 in the sense that it is not -- it is not 24 necessarily picking up the effect of all</p>
<p style="text-align: right;">Page 19</p> <p>1 BY MR. ISAACSON: 2 Q. You have your tables below 3 the sections. 4 A. Sorry. Let me just -- let 5 me just get this straight in my head. 6 And before we move to this 7 one, something has just been troubling me 8 with regard to a question you just asked 9 a second ago, and I think I may have 10 misunderstood the question. Is it okay 11 if I just -- if we can just get some 12 clarification. 13 Q. Sure. 14 A. Because I just want the 15 record to be sure. 16 You asked me if -- if the 17 foreclosure measure is capturing the 18 challenged conduct or something to that 19 effect. 20 Q. What do you want to say 21 about -- just say what you want to say. 22 A. Okay. Let me just tell you 23 because I just don't want there to be 24 any -- any misunderstanding.</p>	<p style="text-align: right;">Page 21</p> <p>1 elements of the challenged conduct, but 2 instead only -- it's really capturing 3 certain restrictions that relate to 4 exclusivity of the fighter contracts and 5 the duration. 6 So I just want to -- I just 7 want to clarify that. I don't know if 8 that -- if that was what you were asking, 9 but I just want to make sure that that 10 is -- 11 Q. Well, we're still going to 12 get to that subject at some point. 13 A. Okay. 14 Q. So I appreciate the preview. 15 A. Okay. So now -- now, let's 16 come back to -- I'm sorry for that 17 digression, but -- 18 Q. All right. So your fourth 19 measure of damages is also based on the 20 statistical relationship between a Zuffa 21 foreclosure share and the fighter shares, 22 the share of revenues that went to labor, 23 correct? 24 A. So we're in Subsection C on</p>

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1 164?

2 Q. Yes.

3 A. Okay. So this -- this
4 method, as the language suggests, goes
5 back and makes use of the pre-Strikeforce
6 acquisition data to inform the parameter
7 of the --

8 Q. What's the --

9 A. I'm sorry, the foreclosure
10 share parameter in the regression.

11 Q. Both the -- both of these
12 regression benchmarks look at the
13 statistical relationship between Zuffa's
14 foreclosure share and its -- and the
15 fighters' share to fighters over time,
16 but one excludes the Strikeforce -- the
17 data before the Strikeforce acquisition
18 and one includes it?

19 A. Exactly.

20 Q. And for common impact for
21 injury in terms of actual modeling, and
22 now I'm just referring to the bout class.

23 A. So are we leaving damages?

24 Q. Yes.

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1 A. We're going to common impact
2 now.

3 Q. Yes.

4 A. Okay.

5 Q. Referring to just -- and I
6 should say those damages models that we
7 just went over were just for the bout
8 class and not the identity class?

9 A. I wouldn't put it exactly
10 that way.

11 Q. How would you put it?

12 A. Well, if you recall, I used
13 the results from the bout class
14 regression to inform the -- the deflation
15 factor for the identity class as well.

16 Q. But the four -- the four
17 models we just described estimate damages
18 for the bout class rather than the
19 identity class; is that correct?

20 A. I think that when the model
21 appears -- when the write-up appears in
22 the bout class section it's speaking to
23 bout class, and when the model invoked in
24 the identity class section, it's speaking

Page 24

1 to the identity class.

2 Q. All right. There are two
3 econometric models that you use for
4 purposes of the common impact analysis,
5 am I correct about that?

6 MR. CRAMER: Objection to
7 form.

8 THE WITNESS: Can I hear
9 that back? I'm sorry.

10 (Pertinent portion of the
11 record is read.)

12 THE WITNESS: Are you -- I'm
13 going to interpret the question,
14 unless it's wrong, with now you're
15 referring to the bout class
16 subsection of the common impact?

17 BY MR. ISAACSON:

18 Q. Yes.

19 A. So I wouldn't -- I wouldn't
20 quite put it that way.

21 Q. All right. Well, let me ask
22 you. So if you look at page 151 of your
23 report, there's a section on Econometric
24 Evidence of a Compensation Structure?

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1 A. Yes, I see that section.

2 Q. And broadly speaking, the
3 first type of econometric evidence that
4 you looked at was you performed
5 regressions to determine whether gains or
6 losses in compensation amongst fighters
7 were broadly shared across the bout
8 class.

9 Do I have that right?

10 MR. CRAMER: You're asking
11 him to put aside the foreclosure
12 regression?

13 MR. ISAACSON: I'm just
14 talking about common impact, yes.

15 MR. CRAMER: Okay.
16 Objection, misstates the system.

17 THE WITNESS: As part of the
18 two-part proof of common impact,
19 the -- in the second part of the
20 proof, I used econometric methods
21 as well as records evidence to
22 demonstrate a pricing structure.

23 But I think that the
24 question assumes away the

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1 existence of another econometric
2 model that undergirds the first
3 part of the two-part proof;
4 namely, the demonstration of a
5 general wage effect.

6 The two-part proof is
7 designed to show that first there
8 is a general wage effect, and 2,
9 there is a mechanism by which that
10 general wage effect gets
11 transmitted to all members of the
12 class.

13 BY MR. ISAACSON:

14 Q. All right. So I'm just
15 looking at your section of Econometric
16 Evidence of a Compensation Structure.
17 All right. So I'm trying just -- the
18 first thing that you have in there, if I
19 have it right, are regressions that you
20 performed to determine whether gains or
21 losses in compensation were broadly
22 shared across the bout class?

23 A. I think that's fair.

24 Q. Okay. And that -- those

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1 regressions don't depend on your
2 foreclosure analysis; is that correct?

3 A. That is correct. They're
4 doing something different.

5 Q. All right. The -- the next
6 type of econometric method are -- is
7 found on page 154, the standard
8 econometric methods that the vast
9 majority of bout class members receive
10 lower compensation than they would have
11 in the but-for world. Am I right, that
12 would be the next piece of econometric
13 evidence that you look at?

14 A. So just to be clear, we're
15 moving to a different method now --

16 Q. Yes.

17 A. -- in demonstrating common
18 impact?

19 Q. Yes.

20 A. And I'm going to employ a
21 different econometric technique to test
22 for common impact.

23 Q. Right. The first technique
24 that you -- econometric technique rather

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1 than looking at documents, the first
2 econometric technique you employed was to
3 look whether gains or losses in
4 compensation were shared across the bout
5 class, and the second is the econometric
6 methods that are in Section C of your
7 report on page 154; is that correct?

8 A. I just want to clarify, and
9 I don't know if this is on purpose, but
10 the first proof involves two econometric
11 elements: There's an econometric element
12 to part 1, which is establishing a
13 generalized wage effect relating to the
14 foreclosure share, and the second part is
15 to show that there was a mechanism by
16 which that generalized wage effect gets
17 transmitted to the -- to the entire bout
18 class. So --

19 Q. I was trying to encompass
20 both of those because I'm doing these in
21 summary form.

22 So you know -- but that's
23 what's in your Section 2, paragraphs 227
24 to 229 that you just described, correct?

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1 A. Correct.

2 Q. Okay. And the results are
3 reported at Table 7?

4 A. Well, the results for the --
5 for the second part, and this is just
6 one -- one result of the second part, so
7 I wouldn't say that Table 7 is the -- is
8 the summary or end-all, be-all of this
9 two-part proof. It's a fairly elaborate
10 proof and it unfolds in multiple parts.

11 Q. All right. So Table 7 is a
12 result of the regressions that you
13 describe in Section 2, paragraphs 227 to
14 229?

15 A. It is a result, yes. It is
16 a result.

17 Q. And the next econometric
18 method that you describe is found in the
19 next section, Section C, correct?

20 A. Correct.

21 Q. All right. And that's where
22 you did use the regression models from
23 the -- from the foreclosure analysis to
24 predict but-for compensation share for

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1 each fighter, correct?

2 A. Correct.

3 Q. Okay. And that's where I go
4 back to Table 6, which is on page 125,
5 and this is one of the regression outputs
6 that you used to predict the
7 compensation -- the compensation for each
8 fighter in the absence of the
9 antitrust -- alleged antitrust
10 violations; is that correct?

11 A. Can I hear that back? I'm
12 sorry.

13 (Pertinent portion of the
14 record is read.)

15 THE WITNESS: So I wouldn't
16 exactly put it that way. I just
17 think the absence of the antitrust
18 violations is too broad given that
19 the set of actions encompassed in
20 the challenged conduct is broader
21 than the set of -- of actions that
22 are being captured by this
23 regression approach.

24 BY MR. ISAACSON:

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1 Q. All right. So would I have
2 it correct if I said that -- that you
3 used the regression that's found at Table
4 6, page 125, as one of the regression
5 outputs that you used to predict the
6 compensation absent the alleged
7 challenged conduct?

8 A. Again, I wouldn't -- I
9 wouldn't quite put it that way.

10 Q. Well, absent -- I've tried
11 absent antitrust violations and I've
12 tried absent challenged conduct. Can you
13 give me something else? Absent what?

14 A. Absent -- how about in a
15 but-for world where in which the
16 foreclosure share wasn't as high as it
17 was in the actual one.

18 Q. All right. So in Table --
19 in -- for purposes of determining common
20 impact, you used the regression on Table
21 6, page 125, to predict the compensation
22 that would exist for each fighter if
23 foreclosure shares were not as high as
24 they actually were?

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1 A. Correct.

2 Q. Now, when you say the
3 foreclosure shares were not as high as
4 they otherwise were, do you mean the full
5 foreclosure shares that are in the
6 regression or could it be any piece of
7 the foreclosure share?

8 MR. CRAMER: Objection to
9 form.

10 THE WITNESS: For each
11 regression there's three different
12 specifications shown in Table 6.
13 There is a different foreclosure
14 share at any point in time
15 depending upon the market
16 definition that I used. And also
17 depending on the weighting method
18 that I used.

19 So whichever -- whichever
20 assumption I used, that is
21 associated with a precise measure
22 of foreclosure at a given point in
23 time, and what the simulation is
24 doing, it's taking the parameters

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1 of the regression model and
2 asking, what would that fighter
3 have been paid as a percentage of
4 event revenue had the foreclosure
5 share not been what it actually
6 was, but instead would have been
7 something else, and I believe for
8 Table 8 I'm positing a world in
9 which the foreclosure share goes
10 to zero.

11 BY MR. ISAACSON:

12 Q. All right. The -- I think
13 it was helpful, but I don't think it's
14 understandable to anybody outside of this
15 room, so excuse me if we repeat some of
16 this.

17 The -- in each of your
18 individual regressions, and I understand
19 you have regressions for different
20 markets, many different regressions, so
21 there will be a range -- there will be a
22 number of foreclosure shares depending on
23 the regressions.

24 When you are talking about a

1 but-for world of a lower foreclosure
2 share, are you referring to the specific
3 foreclosure share that you would find in
4 one of your regressions as opposed to
5 some part of that, you know, say half of
6 it?

7 MR. CRAMER: Objection to
8 form.

9 THE WITNESS: I don't
10 understand the question. I'm
11 sorry.

12 BY MR. ISAACSON:

13 Q. So -- and that's my fault,
14 but let me keep trying.

15 The -- when you refer to the
16 but-for world of a lower foreclosure
17 share, do you mean the full lower
18 foreclosure share that would be specified
19 in whatever regression you're looking at
20 as opposed to some fraction of it?

21 A. No, I wouldn't put it that
22 way.

23 Q. So for example, if I was
24 looking at a -- just one of your

1 regressions and it specified a
2 foreclosure share, give me an example of
3 a foreclosure share.

4 A. Well, the question -- I'm
5 just trying -- the regression doesn't --

6 Q. Help me out and give me an
7 example of a foreclosure share, a number
8 that would express it.

9 A. 90 percent.

10 Q. Okay.

11 A. It could have been
12 90 percent at a given point in time
13 depending upon the market definition used
14 and depending upon the weighting method
15 used.

16 Q. Right.

17 A. The actual foreclosure at a
18 given point in time could have been
19 90 percent, that would have entered in on
20 the right-hand side of regression, but as
21 we -- as we move to the but-for
22 world we're going --

23 Q. Let me ask a question
24 because all I asked you for was a

1 percentage.

2 A. We're not going to have it.
3 But I keep hearing did I have it or did I
4 take a percentage of it. The answer is
5 no. I didn't -- I didn't do that. No
6 simulation halves the foreclosure share.
7 There are three simulations: One
8 simulation projects what the fighter wage
9 shares would be at zero percent
10 foreclosure share, another simulation
11 projects what fighter wage shares would
12 be at 20 percent foreclosure levels, and
13 another simulation projects what fighter
14 wage shares would be at 30 percent
15 foreclosure.

16 So I'm getting tripped up on
17 do I -- does the regression halve it.
18 The regression doesn't halve anything.
19 Halve as in cut in half. The regression
20 takes the data as it is, right?

21 Q. Right.

22 A. It understands the
23 relationships between foreclosure share
24 and wage share controlling for all

1 other -- all other things, right, and
2 then it's done. Regression is done.

3 The regression doesn't get
4 to say what the but-for world looks like.
5 I'm using the regression parameters to
6 project what fighter wage shares would be
7 in a but-for world in which the
8 foreclosure share was either zero
9 percent, 20 percent or 30 percent.

10 Q. All right. The -- so if you
11 had a regression that specified a
12 foreclosure share of 90 percent,
13 depending on which model you were using,
14 your but-for world would have a
15 foreclosure percent of zero percent,
16 20 percent or 30 percent, do I have that
17 correct?

18 A. No, you don't have it right.

19 Q. Hum?

20 A. You don't have it right.
21 I'm getting tripped up on the word if the
22 regression specifies a foreclosure share
23 of 90 percent.

24 Q. Well, let me take that out

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1 of the question then.

2 For each of your models, you
3 have a but-for world where the
4 foreclosure share for Zuffa is either
5 zero percent, 20 percent or 30 percent.

6 Do I have that right?

7 A. I think you've got that
8 right.

9 Q. Okay. And that's regardless
10 for what foreclosure is specified in the
11 regression?

12 A. I'm just -- I wish we could
13 use a different word than specified.

14 Q. What word would you use?

15 A. The regression doesn't get
16 to specify the foreclosure share, just as
17 the regression doesn't get to specify how
18 many punches a fighter threw, right, or
19 how many successful punches.

20 Q. Tell me what word you want
21 me to use.

22 A. So the regression takes the
23 data as the world presents it. The
24 regression doesn't get to specify.

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1 Q. Foreclosure is an output of
2 the regression?

3 A. No, it's an input. It's an
4 input.

5 Q. Okay. So --

6 A. But the regression doesn't
7 get to -- doesn't get to pick what
8 foreclosure is or specify it. Maybe I'm
9 misinterpreting what you mean by--

10 Q. I'm just trying to find a
11 word that you're comfortable with.

12 A. The regression takes the
13 data as the world presents it and looks
14 for relationships between those data.

15 Q. Right.

16 A. All right? So it doesn't
17 specify. The -- maybe what would be
18 helpful is that the market definition --
19 the market definition that I choose and
20 the weights that I apply generate a
21 measure of foreclosure share.

22 Q. Okay.

23 A. Right? And then I'm going
24 to apply a regression analysis. But the

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1 regression doesn't get to specify, the
2 regression takes the foreclosure share as
3 an input.

4 Q. So regardless of the measure
5 of foreclosure share that's generated by
6 any specific model, the world -- you are
7 going to assume for purposes of
8 estimating impact or damages that the
9 actual foreclosure share of Zuffa will be
10 zero, 20 percent or 30 percent depending
11 on the model?

12 MR. CRAMER: Objection to
13 form.

14 BY MR. ISAACSON:

15 Q. That's correct?

16 MR. CRAMER: Objection to
17 form.

18 THE WITNESS: It was close.
19 You said the model to start the
20 question, and just again to be --
21 to be specific, the regression --
22 the regression doesn't get to pick

23 the foreclosure share. The
24 foreclosure share flows from which

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1 market definition and which
2 weighting method I use, right?
3 That -- that will generate a
4 foreclosure share that gets spit
5 out, I think, of a Microsoft Excel
6 file, and that foreclosure share
7 is going to be spit out alongside
8 each observation in the dataset.

9 The regression finds a
10 relationship between that
11 foreclosure share and the
12 fighters' wage share controlling
13 for all other things and then the
14 regression is done.

15 At that point, I -- I can
16 make use of the parameters that
17 come out of the regression to
18 project what a fighter's wage
19 share would be in a but-for world
20 in which the foreclosure share was
21 lower.

22 Sorry, I'm being -- I'm
23 being attacked here by a gnat.
24 And -- thank you.

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1 And I use three different
2 scenarios: Zero percent,
3 20 percent and 30 percent.

4 BY MR. ISAACSON:

5 Q. Now, when you use a world in
6 which there -- Zuffa has zero percent
7 foreclosure, how does that translate into
8 any -- a market share for Zuffa?

9 A. Oh, it could accommodate
10 many different market shares for Zuffa.
11 It is -- one way of putting it is almost
12 agnostic to the market share. It
13 could -- it could accommodate many.

14 You can have -- just to be
15 clear, you can have a high market share
16 and zero foreclosure share if all of your
17 fighters are under, say, 12-month
18 contracts.

19 Q. And do I understand
20 correctly that if all the Zuffa fighters
21 were under 12-month contracts, you would
22 expect the foreclosure share of Zuffa to
23 be zero or close to zero?

24 MR. CRAMER: Objection to

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1 is there any measure of foreclosure where
2 a 12-month contract, in your opinion,
3 would not result in the zero or near zero
4 foreclosure?

5 MR. CRAMER: Objection to
6 form.

7 THE WITNESS: Let me hear it
8 back. But I don't think I
9 understood it, but let me just
10 hear it.

11 BY MR. ISAACSON:

12 Q. Well, because you just told
13 me about how your 30-month baseline, and
14 you confined your answer to that
15 particular measure of foreclosure.

16 And I'm asking you, is there
17 any measure of foreclosure where a
18 12-month contract for all Zuffa fighters
19 would not result in zero or near zero
20 foreclosure?

21 MR. CRAMER: Objection to
22 form.

23 THE WITNESS: Well,
24 certainly not if you use 30 months

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1 form.

2 THE WITNESS: So I -- I deem
3 a fighter to be foreclosed, or to
4 be working or employed pursuant to
5 an exclusionary contract if, as
6 you know, the contract is
7 exclusive and if the duration
8 exceeds a certain number of
9 months. I use 30 months I think
10 as my -- my baseline approach.

11 And so if you -- if you
12 allow me to use that 30-month
13 baseline or cutoff as a measure
14 for whether a fighter is
15 foreclosed, and if your question
16 posits that every Zuffa fighter
17 under contract is -- is at
18 12 months, then by construction,
19 12 months is less than 30 months,
20 and therefore, under that
21 particular measure of foreclosure,
22 no fighter would be foreclosed.

23 BY MR. ISAACSON:

24 Q. All right. Is there any --

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1 as the cutoff, but if -- if the
2 court, for example, were to deem
3 that 12 months with an
4 exclusion -- with an exclusive
5 arrangement were exclusionary,
6 then contracts with 12 months
7 would be exclusionary. It's
8 tautological. It depends on where
9 you draw the cutoff and what --
10 what conditions you require for --
11 for one to conclude that a
12 contract was exclusionary.

13 BY MR. ISAACSON:

14 Q. All right. So I'm not
15 asking you any questions about what
16 courts rule, I'm asking you questions
17 that come out of your models.

18 Is there any measure of
19 foreclosure in any of your models where a
20 12-month contract for all Zuffa fighters
21 would not result in zero or near zero
22 foreclosure?

23 MR. CRAMER: Objection to
24 form. Asked and answered.

<p style="text-align: right;">Page 46</p> <p>1 THE WITNESS: I'd have to</p> <p>2 think about it some more, but I</p> <p>3 think I -- I think I gave you -- I</p> <p>4 think I gave you what the answer</p> <p>5 was, which is that it depends</p> <p>6 on -- on how you draw the -- the</p> <p>7 line.</p> <p>8 BY MR. ISAACSON:</p> <p>9 Q. All right. And how would</p> <p>10 you define zero percent foreclosure? You</p> <p>11 said some of your models assume zero</p> <p>12 percent foreclosure. How do you define</p> <p>13 zero percent foreclosure?</p> <p>14 A. So no model assumes it.</p> <p>15 Just to be clear, I'm projecting but-for</p> <p>16 worlds in which the foreclosure share is</p> <p>17 zero, 20 or 30 percent. But I'm</p> <p>18 interpreting the question as how could</p> <p>19 Zuffa get to zero percent foreclosure?</p> <p>20 Q. Right. How would you define</p> <p>21 Zuffa with zero percent foreclosure?</p> <p>22 A. It can get -- you could get</p> <p>23 to zero percent foreclosure in myriad</p> <p>24 ways. So I'm not -- I'm not specifying</p>	<p style="text-align: right;">Page 48</p> <p>1 share?</p> <p>2 MR. CRAMER: I'm going to</p> <p>3 object to the extent it calls for</p> <p>4 a legal conclusion.</p> <p>5 But you can answer.</p> <p>6 And asked and answered.</p> <p>7 THE WITNESS: I think I've</p> <p>8 covered -- I've covered the basis.</p> <p>9 I think that the most -- the most</p> <p>10 obvious way to construct it is by</p> <p>11 coming up with a baseline in terms</p> <p>12 of number of months in which an</p> <p>13 exclusive contract is deemed</p> <p>14 exclusionary and positing a world</p> <p>15 in which Zuffa's contracts come</p> <p>16 under that -- that cutoff. They</p> <p>17 could be 15 months long, they</p> <p>18 could be 17 months long.</p> <p>19 BY MR. ISAACSON:</p> <p>20 Q. All right. And that cutoff</p> <p>21 that needs to be posited, is that a legal</p> <p>22 cutoff or is that a matter of economics?</p> <p>23 MR. CRAMER: Objection to</p> <p>24 form.</p>
<p style="text-align: right;">Page 47</p> <p>1 exactly how you get there. I can give</p> <p>2 you examples, I think we just did, in</p> <p>3 which the legal standard is 30 percent --</p> <p>4 30 months -- sorry. If the legal</p> <p>5 standard were 30 months and if counter-</p> <p>6 factually all of -- well, and if Zuffa's</p> <p>7 contracts all were 12-month contracts,</p> <p>8 then the foreclosure share by my measure</p> <p>9 would be zero percent.</p> <p>10 But that's just one way.</p> <p>11 There are -- there are many -- there are</p> <p>12 many ways to get your foreclosure share</p> <p>13 down. You can -- you can divest --</p> <p>14 divest fighters and send -- send fighters</p> <p>15 to a -- to an independent organization</p> <p>16 thereby decreasing your market share and</p> <p>17 thereby decreasing your foreclosure</p> <p>18 share.</p> <p>19 There's -- there are many</p> <p>20 ways to get to -- to a lower foreclosure</p> <p>21 share.</p> <p>22 Q. All right. So can you give</p> <p>23 me some other examples of ways that Zuffa</p> <p>24 could get to zero percent foreclosure</p>	<p style="text-align: right;">Page 49</p> <p>1 THE WITNESS: I think it is</p> <p>2 ultimately a legal decision, but</p> <p>3 it can be informed through</p> <p>4 economics. I hope economics can</p> <p>5 inform the law at times.</p> <p>6 BY MR. ISAACSON:</p> <p>7 Q. All right. You mentioned</p> <p>8 reducing the baseline number of months</p> <p>9 for the exclusive contracts, and you</p> <p>10 mentioned divesting fighters to -- to an</p> <p>11 independent organization from Zuffa.</p> <p>12 Are there any other examples</p> <p>13 that you can think of as to how Zuffa</p> <p>14 could reach zero or near zero</p> <p>15 foreclosure?</p> <p>16 A. Sure. I can keep on coming</p> <p>17 up with examples.</p> <p>18 One example would be that</p> <p>19 there's no exclusivity provision in the</p> <p>20 contracts.</p> <p>21 Q. All right. That's one. Are</p> <p>22 there any other examples?</p> <p>23 MR. CRAMER: Asked and</p> <p>24 answered, form.</p>

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1 find it reasonable to go to an
2 organization that cannot afford him or
3 her any quality opponents to fight. If
4 you can't fight a highly-ranked opponent,
5 you have no chance of moving up the
6 rankings.

7 And so I'm answering a
8 related question, which I think is the
9 more important question. And I'll leave
10 it at that.

11 Q. Okay. So in general it's
12 going to help me today if you answer my
13 questions and not the related questions
14 you think are more important. You'll
15 have the opportunity to do the related
16 questions you think are more important
17 with your counsel, but I'm under time
18 limits.

19 And I understand you gave an
20 explanation, but was the answer to my
21 question, yes, that in your opinion there
22 are no reasonable substitutes for the
23 fighters outside of the tracked market
24 and outside the ranked market?

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1 MR. CRAMER: Objection to
2 form.

3 THE WITNESS: I'm saying for
4 certain fighters inside of that
5 category or class, depending on
6 how you define the market, there
7 might be what that one fighter
8 considers to be a reasonable
9 substitute, but that doesn't end
10 the inquiry.

11 The question is would there
12 be a sufficient number of fighters
13 inside of that definition such
14 that a hypothetical monopsonist
15 trying to exercise market power
16 would be -- would be defeated in
17 the sense that it would suffer a
18 profit loss by trying to push
19 wages below competitive wages.

20 One fighter within the set
21 finding an outlet to be
22 reasonable, right, doesn't cut it.

23 BY MR. ISAACSON:

24 Q. The -- okay. I think I

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1 understand. So what I -- if I understand
2 what you're saying is, in your opinion,
3 there's not a sufficient number of
4 reasonable substitutes of fighters
5 outside the tracked markets and outside
6 the ranked market to affect your market
7 definition?

8 A. I wouldn't put it that way.

9 Q. I understand you were
10 saying -- before I said there are no
11 reasonable substitutes and you're saying
12 one doesn't matter. The -- so tell me
13 how you would put it.

14 A. There would have to be
15 enough fighters in your -- in your
16 defined set that would consider these
17 outside options reasonable so as to
18 defeat the wage decrease -- so as to
19 render the wage decrease unprofitable.

20 Q. Okay. All right. So just
21 to sum it up, in your opinion, there's
22 not a sufficient number of reasonable
23 substitutes of fighters outside the
24 tracked market or outside the ranked

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1 market to defeat a wage decrease if that
2 were to happen?

3 A. I'd like to put it back in
4 my own words, that once you've defined
5 the set as I've done it, there wouldn't
6 be sufficient defection or substitution
7 away to forums or venues outside of the
8 definition by fighters inside of the
9 market so as to render this hypothetical
10 wage decrease unprofitable.

11 Q. Right. Okay. Now, is it --
12 would it be the case that, in general,
13 fighters outside of the ranked and
14 tracked markets would not be affected by
15 wage increases within those markets?

16 MR. CRAMER: Form.

17 THE WITNESS: That is --
18 that is outside I believe of the
19 scope of anything that -- that
20 I've studied. I'd have to think
21 about it. But it's unrelated to
22 what I think the relevant question
23 is for determining the relevant
24 product market -- the relevant

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1 input market.

2 MR. CRAMER: Is it a good
3 time for a break? We've been
4 going for about an hour. I need
5 to use the men's room.

6 MR. ISAACSON: Sure.

7 MR. CRAMER: Thank you.

8 THE VIDEOGRAPHER: The time
9 is 10:22 AM. We are going off the
10 record.

11 (Recess.)

12 THE VIDEOGRAPHER: The time
13 is 10:33 AM. We are back on the
14 record.

15 BY MR. ISAACSON:

16 Q. So using the models in your
17 report, can you tell me how you would go
18 about estimating the damages suffered by
19 the individual plaintiffs in this case?
20 Just take an example, John Fitch.

21 A. So I haven't done that and
22 I'd have to think about it. I interpret
23 that to mean how I would go about doing
24 an allocation of aggregate damages, and

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1 that would be the closest thing to
2 getting to an individual underpayment.
3 But I haven't -- I haven't performed that
4 yet and so I really don't -- I can't
5 offer you a concrete way of how I'd do it
6 at this time.

7 Q. The -- if you look at your
8 impact analysis, which does show impact
9 as to individual fighters, correct?

10 A. One of the two methods of
11 the impact section looks at -- from the
12 perspective of the individual fighters,
13 yes.

14 Q. So if you were going -- if I
15 wanted to know the individual impact
16 using that method of the alleged
17 conduct on Mr. Fitch, how would I go
18 about that?

19 MR. CRAMER: Objection to
20 the term "individual impact" as
21 being vague. You mean whether or
22 not he was impacted or by how
23 much?

24 BY MR. ISAACSON:

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1 Q. By how much.

2 A. Well, under that second
3 approach, I compare what a fighter's
4 actual wage share was against his or her
5 but-for wage share based on the
6 parameters of the regression model, and
7 an assumed but-for foreclosure level.

8 Q. And so within your data,
9 would it show what, for example,
10 Mr. Fitch's actual wage was compared to
11 the assumed but-for foreclosure level?

12 MR. CRAMER: Objection to
13 form. I don't think that's what
14 he just testified.

15 THE WITNESS: Can I hear
16 that back?

17 BY MR. ISAACSON:

18 Q. Well, let me put it
19 differently.

20 A. Okay.

21 Q. You know, under your
22 second -- under that approach, do you
23 have within your data what Mr. Fitch
24 would have earned using your but-for

Page 65

1 foreclosure shares?

2 A. That particular model can
3 project what Mr. Fitch would have earned
4 on a particular fight given an assumed
5 but-for foreclosure share.

6 Q. And in your impact model,
7 your assumed foreclosure share is zero
8 percent or 20 percent, is that right, you
9 look at it both ways?

10 A. You'd have to take me back
11 to the page, but my -- I thought that I
12 had -- maybe I'm getting confused for
13 impact and anticompetitive effects, but I
14 believe that I've -- I've performed
15 projections at zero, 20 percent and
16 30 percent.

17 Q. If you just look at Table 8,
18 which is on page 155.

19 A. Okay.

20 MR. CRAMER: And I'll note
21 for the record there's an errata
22 that adjusts Table 8.

23 MR. ISAACSON: Help me out
24 which errata we want to look at.

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1 MR. CRAMER: The one you
2 got.

3 MR. ISAACSON: Oh, yes, yes,
4 yes. I don't know if that affects
5 this, but...

6 BY MR. ISAACSON:

7 Q. Let's look at Exhibit 3,
8 line -- item 77, which is page 4.

9 A. Got it.

10 Q. The two but-for foreclosure
11 shares you looked at for impact analysis
12 were zero and 20 percent; is that right?

13 A. Oh, in this table, yes. For
14 the purpose of performing this test, I
15 used zero and 20 percent, correct.

16 Q. The -- and for your damages
17 analysis, excluding your Bellator and
18 Strikeforce benchmarks, you used a
19 but-for foreclosure share of 20 percent
20 or 30 percent; is that right?

21 A. I used those and it's
22 possible that I also projected damages in
23 a world in which -- in a but-for world in
24 which foreclosure was set to zero.

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1 Q. All right. In terms of
2 actual damage estimates you state in your
3 report, do you use either but-for
4 20 percent or 30 percent rather than zero
5 percent?

6 A. I'd have to go back and
7 check the report.

8 Q. You know, one question I
9 should ask you before the day is over, so
10 let's do it now.

11 You have different damages
12 numbers reported. What is your opinion
13 of the amount of damages in this case?

14 A. I think that all the methods
15 that I put forward are reasonable and
16 viable and are economically sound. It's
17 hard for me to say that I'm partial to
18 one over the other. I realize that
19 there's a range, but I think they're all
20 good.

21 Q. And I understand that you
22 believe they're all good. Within that
23 range, do you have an opinion as to
24 what's the appropriate method --

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1 appropriate amount of damages in this
2 case?

3 A. I think the appropriate
4 amount of damages would span the range
5 that I offered.

6 Q. But there's no number within
7 that range that you have -- you don't
8 have an opinion as to any specific number
9 within the range of damages that you've
10 estimated that's the appropriate number
11 of damages in this case?

12 MR. CRAMER: That misstates
13 the testimony. Form.

14 THE WITNESS: I think
15 that -- that certain methods were
16 designed in a way to be especially
17 conservative. And so to that
18 extent, it may -- it may not
19 capture the -- the full impact.

20 I also will note again that
21 I'm -- with respect to these
22 regression based approaches, it's
23 turning entirely on -- on one
24 mechanism; namely, funneling

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1 fighters through these
2 exclusionary fighter contracts,
3 and because it does not capture
4 other forms of the challenged
5 conduct, it's going to understate
6 what total damages are.

7 But I'm -- I'm loath at this
8 point to say that I -- I like one
9 number in that range. I think --
10 I think the range covers the
11 reasonable range of what -- of
12 what the damages are in this case.

13 BY MR. ISAACSON:

14 Q. And within that range, you
15 would not give an opinion as to what's
16 the appropriate amount of damages --
17 within that range you're not going to
18 give an opinion about what's the
19 appropriate range -- the appropriate
20 number of damages, any number within that
21 range is fine to you?

22 A. I don't think any number
23 within the range. I don't think that was
24 my testimony. I think that I've -- I've

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1 Q. You have not done any impact
2 models or damages models where you --
3 where you use as an input the actual
4 amount of fighter pay as opposed to the
5 fighter share?

6 A. I don't think that's true.
7 I have -- in my impact section, I've run
8 a model on levels, not related to
9 foreclosure share, but levels of fighters
10 compared to what other fighter were being
11 paid.

12 But if you're asking have
13 I -- have I run a model that relates
14 foreclosure share to the levels, I have
15 not done that.

16 Q. All right. I think I
17 understand you, but let me get it
18 straight.

19 You have not run any models
20 that establish the -- that establish the
21 fact of injury or the amount of damages
22 that rely on the actual salaries that
23 are -- not salaries, the actual
24 compensation paid to fighters as opposed

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1 to the fighters' share?

2 MR. CRAMER: Objection to
3 form.

4 THE WITNESS: No, I'm going
5 to -- I'm going to say no to that
6 one. I thought I just clarified.

7 BY MR. ISAACSON:

8 Q. Just say no and I'll ask you
9 a follow-up question.

10 A. Fine. No.

11 Q. The -- when you look at
12 actual fighter pay, that's when you
13 were -- when you used actual fighter pay
14 as opposed to fighter share, that's when
15 you performed regressions to determine
16 whether gains or losses in a compensation
17 were broadly shared across the bout
18 class, correct?

19 A. Correct, as part of an
20 impact model.

21 Q. Right. And does that model
22 generate an amount of impact or amount of
23 damages?

24 A. No, that model was to

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1 establish the fact of common impact.

2 Q. And the results showed that
3 individual fighter compensation per event
4 moves together with per event
5 compensation paid to other fighters; is
6 that correct?

7 A. Yes.

8 Q. Okay. And while it
9 establishes that the compensation moves
10 together, the output of that model does
11 not actually demonstrate injury to any
12 specific fighter; is that correct?

13 MR. CRAMER: Objection to
14 form.

15 THE WITNESS: I would say
16 the output of that model in
17 conjunction with other steps in
18 that two-part proof show impact to
19 all fighters.

20 BY MR. ISAACSON:

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3 A. This analysis must be
4 understood in conjunction with other
5 analyses in the section, the totality of
6 which establishes common impact.

7 Q. I agree with that. What I'm
8 saying is this -- this model by itself
9 would not show any injury to any specific
10 fighter, it would have -- it would have
11 to be considered in conjunction with
12 other analysis that you've done?

13 A. I think that's fair. I
14 would not -- I would not offer this model
15 by itself as proof of common impact. I
16 would offer it, as I did, in conjunction
17 with other models in the section, and
18 record evidence, of course.

19 Q. Right. So the models that
20 actually conclude by themselves that
21 there was damage or impact to individual
22 fighters are all expressed in terms of
23 fighters' share and don't rely on data
24 but actual fighter pay; is that correct?

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1 MR. CRAMER: Objection to
2 form.

3 THE WITNESS: No, that's not
4 correct.

5 BY MR. ISAACSON:

6 Q. The models that show actual
7 impact or damages by themselves all are
8 expressed in terms of the fighters' share
9 of revenue, correct?

10 A. I wouldn't put it that way
11 either.

12 Q. Okay. For each of those
13 models you were looking at what the
14 fighter share of revenue actually was
15 compared to what it would be in the
16 but-for world using the models that
17 you've relied on, correct?

18 A. For certain models, the
19 left-hand side variable of the regression
20 was expressed in terms of fighter share
21 as opposed to absolute level.

22 But I want to make clear for
23 the record that the numerator is the
24 fighters' pay. So when you say the

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1 models aren't taking into consideration
2 the fighters' pay, I have to -- I have
3 to -- I have to reject that.

4 Q. All right. So there is a
5 variable in each of your impact models
6 and damages models that actually estimate
7 a dollar effect on fighters that relies
8 on the fighters' share as opposed to the
9 absolute level of compensation of the
10 fighter. Do I have that right? What you
11 call the variable on the left-hand side.

12 A. Yeah, the dependent variable
13 in certain models is expressed in terms
14 of fighter's share, and to figure out
15 what the effect is on a fighter's
16 absolute pay, it's a ministerial change
17 to convert from an actual fighter share
18 to a but-for fighter's share, and then
19 knowing what the event revenue was to
20 convert to a but-for fighter pay.

21 So I think that -- I think
22 that to say that it's -- it's not making
23 use of actual fighter pay just misses
24 what's -- what's going on.

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1 Q. All right. So on page 155,
2 Table 8.

3 A. Okay.

4 Q. Which reports on a
5 regression you did for impact. The
6 dependent variable there was the
7 fighter's share of revenue rather than
8 the absolute level of compensation, am I
9 correct?

10 A. Correct.

11 Q. Okay. And the same would be
12 true for each of the regressions in your
13 damages models; is that correct?

14 A. I believe that's fair, that
15 the dependent variable in those models
16 was fighter share of revenues.

17 Q. I'm going to take a big
18 chance here and ask if you can explain
19 for our audience what you mean by a
20 dependent variable.

21 A. Sure. So the dependent
22 variable is the variable that we are
23 trying to understand and explain what --
24 what drives it to -- to move around. And

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1 so we -- you'll also hear the expression
2 the left-hand side variable, but -- but
3 it's -- it's the variable of interest.
4 We are -- we are trying to -- to
5 understand the world through -- through
6 that variable and to explain what causes
7 it to vary.

8 Q. All right. So I'd like -- I
9 think variable of interest is a phrase
10 you use in your report, and I guess it's
11 also comfortable calling it a dependent
12 variable for a layperson, the variable
13 we're trying to explain. Both of those
14 would be acceptable?

15 A. Sure.

16 Q. Okay. The --

17 THE VIDEOGRAPHER: We're ten
18 minutes left on this tape,
19 Counsel.

20 MR. ISAACSON: All right.
21 We'll go about five more minutes
22 and take a break.

23 BY MR. ISAACSON:

24 Q. Have you done damages

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1 analysis before where you had used the
2 percentage of -- the percentage of
3 revenue as opposed to the absolute level
4 of compensation as the variable of
5 interest?

6 A. It's possible. Sitting here
7 I'm thinking of another -- of another
8 wage case that I did, which was -- which
9 I refer to as Arizona Travel Nurses, and
10 it's possible that we -- when we did our
11 modeling there, we expressed -- in fact,
12 it's kind of coming back to me. I think
13 we were interested in a nurse's payment
14 relative to her bill rate. So -- so yes,
15 I believe I've -- I've done something
16 like that before.

17 Q. You say something like that,
18 have you done -- have you used as the
19 variable of interest before the share of
20 total revenue that goes to the labor
21 force, whether that labor force is an
22 employee or -- or contractors?

23 A. I think so.

24 Q. Okay. And you think you did

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1 that in Arizona Travel Nurses?

2 A. Yeah, it's an old case, but
3 I -- some -- some faint memories are
4 coming back, and I -- I believe that
5 to -- to establish similar things, common
6 impact there, we were -- we were looking
7 at the bill rate as the denominator,
8 that's how much the hospital was -- was
9 charging for the -- for the nurse, and
10 the numerator was the wage that went to
11 the -- to the nurse, and so it's an
12 analogous construction of a dependent
13 variable.

14 Q. Any other cases that you --
15 where you've estimated damages using the
16 variable of interest or the dependent
17 variable as the share to labor?

18 A. I'm not sure. I'm not sure
19 how many other wage suppression cases
20 I've done besides -- besides these two.
21 I'd have to -- I'd have to go back and
22 think about it.

23 Q. Okay.

24 MR. ISAACSON: All right.

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1 Why don't we take a break?

2 MR. CRAMER: Sure.

3 THE VIDEOGRAPHER: The time
4 is 11:26 AM. We are going off the
5 record, and this is the end of
6 Disk 1.

7 (Recess.)

8 THE VIDEOGRAPHER: The time
9 is 11:40 AM. This is the start of
10 Disk 2, and we are now on the
11 record.

12 BY MR. ISAACSON:

13 Q. So I want to continue our
14 discussion of the percentage of revenue
15 paid to labor as the variable of
16 interest.

17 Is there economic literature
18 that you're familiar with that discusses
19 the percentage of revenue that's paid to
20 labor in a competitive industry as
21 opposed to an industry that's less
22 competitive?

23 A. Is there economic
24 literature?

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1 opposed to as a percentage of revenue?

2 MR. CRAMER: Objection to
3 form, to generally. For what
4 purpose?

5 THE WITNESS: A firm could,
6 if a firm bills -- if a law firm
7 bills an associate out at \$400 an
8 hour, it could express what the --
9 what the young lawyer's salary on
10 an hourly basis is as a -- under
11 an assumed utilization rate as a
12 percentage of that young lawyer's
13 bill rate.

14 BY MR. ISAACSON:

15 Q. And are you aware of any
16 studies which express the marginal
17 revenue product of labor in terms of the
18 percentage of revenue of the firm?

19 A. I'm not aware, but as you've
20 expressed it, that's not quite what I'm
21 doing either.

22 Q. Now, in terms of -- did you
23 make any effort to measure the marginal
24 revenue product of labor of UFC fighters?

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1 A. Yes.

2 Q. Okay. And what would you
3 point to me for that?

4 A. What I did, which is I -- I
5 calculated the average revenue per event,
6 per fighter, and I'm using that as a
7 proxy for the marginal revenue product.

8 Q. All right. If the
9 average -- when you look at the average
10 revenue per event, per fighter, how do
11 you determine what part of that revenue
12 is the contribution of the fighter as
13 opposed to, for example, marketing,
14 promotions, production or the work of the
15 overall firm?

16 A. So for my purposes, I don't
17 need to figure out that -- that
18 decomposition. I will note, however,
19 that I cite a study in my literature
20 review section that suggests that the
21 fighter is responsible for, if not all,
22 the vast majority of -- of the
23 pay-per-view revenues that are captured
24 and not the brand.

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1 Q. Well, I didn't ask about the
2 brand.

3 The -- you would agree --
4 you would agree with me that effective
5 marketing and promotion could increase
6 the average revenue per event, correct?

7 A. Yes.

8 Q. And you would agree with me
9 that super- -- improving television
10 production can increase the average
11 revenue per event?

12 MR. CRAMER: All things
13 equal?

14 MR. ISAACSON: Yes.

15 THE WITNESS: I'm not sure
16 what -- what you mean by improving
17 television production.

18 BY MR. ISAACSON:

19 Q. A better production that
20 people enjoy more.

21 MR. CRAMER: Objection to
22 form.

23 THE WITNESS: And you're
24 asking me if I can conceive of

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1 this as a matter of theory?

2 BY MR. ISAACSON:

3 Q. Yes.

4 A. As opposed to whether it
5 actually happened?

6 Q. Yes.

7 A. I think I'm -- I'm going to
8 grant you that as a matter of theory one
9 could -- one could add value by
10 increasing the quality of the production.

11 Q. Okay. Now, in this case,
12 you did not do an actual study yourself
13 of the contribution of the UFC fighters
14 to the average revenue per event; is that
15 right?

16 MR. CRAMER: Asked and
17 answered.

18 THE WITNESS: I think that's
19 correct. As I noted a few moments
20 ago, that was not necessary for my
21 purposes.

22 BY MR. ISAACSON:

23 Q. By using the average revenue
24 per event, per fighter as a proxy, were

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1 you using that as a proxy for the
2 marginal revenue product of that labor?

3 A. Yes.

4 Q. Okay. And you were assuming
5 that all of that average revenue per
6 event, per fighter was the product of
7 that labor as opposed to some other
8 source?

9 MR. CRAMER: Form.

10 THE WITNESS: No, I don't
11 think I'm assuming that.

12 BY MR. ISAACSON:

13 Q. When -- when you look at
14 average revenue -- I'm sorry. When you
15 ordinarily look at the marginal revenue
16 product of labor, do you talk about
17 everybody who works in the firm including
18 management?

19 MR. CRAMER: Objection to
20 form.

21 THE WITNESS: If -- if this
22 were some other case and you were
23 interested in computing the
24 marginal revenue product of

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1 management, you might -- you might
2 be interested in that. But that
3 wasn't what I was trying to do
4 here.

5 BY MR. ISAACSON:

6 Q. All right. Here, have you
7 attempted to actually estimate the
8 marginal revenue product of the fighter
9 portion of the labor force of the UFC?

10 MR. CRAMER: Objection to
11 form.

12 THE WITNESS: I think you're
13 getting at the same question now,
14 just asked in a different way
15 which is have I done a
16 decomposition of the marginal
17 revenue product between the
18 fighters and -- and Zuffa, and the
19 answer is no, I have not done that
20 decomposition.

21 BY MR. ISAACSON:

4 Q. You, yourself, have not
5 looked at the levels of pay over time
6 paid to Zuffa's fighters other than
7 looking at this study?

8 MR. CRAMER: Objection to
9 form.

10 THE WITNESS: So I wouldn't
11 put it that way.

12 BY MR. ISAACSON:

13 Q. How would you put it?

14 A. I am absolutely looking at
15 their pay over time in the sense that I'm
16 recording their pay as the numerator of
17 my dependent variable. So to suggest
18 that I'm not looking at their -- their
19 pay is erroneous.

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1 Q. And one way is restricting
2 the amount of labor hired and the other
3 is restricting the compensation paid to
4 labor?

5 A. Correct.

6 Q. And a traditional economy
7 theory of monopsony would restrict the
8 amount of labor hired, do I have that
9 correct?

10 A. Well, here the way that it
11 manifests itself is -- is a bit different
12 but -- because I'm, of course, thinking
13 of the shelving, but in other
14 applications, you can think about not
15 merely hiring, a monopsonist, all things
16 equal, generates less output and less
17 inputs than -- than does a competitive
18 firm.

19 I think as it's applied
20 here, the way that the suppression of
21 fights and output occurred was -- was in
22 part due to the shelving of fighters. So
23 fighters were being hired, but not
24 necessarily deployed.

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8 Q. How do I -- with the
9 understanding that you've said that
10 marginal revenue product of labor is the
11 value of the additional output created
12 when the firm adds a worker, how do I
13 know how much increased percentage of
14 revenue should be paid to a worker based
15 on the marginal revenue product of their
16 labor?

17 A. I don't think I understand
18 that question.

19 Q. Okay. Looking at 450 --
20 that footnote 454, you say firms that
21 wield monopsony power pay a smaller share
22 of revenue of labor and they do that in
23 two ways, right?

24 A. Yes.

1 Q. All right. Now, you were
2 telling me how that was applied here, but
3 am I correct that in traditional economic
4 therapy, a monopsony restricts the amount
5 of labor that's hired?

6 A. Yes.

7 Q. Now, we've been talking
8 about --

9 A. I would amend hired or
10 deployed.

11 Q. The -- we've been talking
12 about labor share or fighter share. You
13 mentioned weighting by revenue before.
14 Let's come back -- let's go to that topic
15 now.

16 If we look at paragraph 128
17 of your report.

18 A. Oh, did you want page 128 or
19 paragraph 128?

20 Q. Paragraph 128.

21 A. Give me one second.

22 Q. Page 87.

23 A. Okay. Paragraph 128.

24 Q. Yes. Then there's a Figure

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Q. The -- would another factor that would increase the foreclosure share for the revenue weighted measures be increased revenue generated by Zuffa compared to its competitors?

MR. CRAMER: Objection to form. Incomplete hypothetical.

THE WITNESS: I can say that holding all things equal, Zuffa's market share, the share of Zuffa fighters who are fighting pursuant to an exclusionary contract, that under the revenue weighting based measure, and only under the revenue weighting based measure of foreclosure, would an increase in the relative revenues per event, per fighter for Zuffa cause the foreclosure share to increase.

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BY MR. ISAACSON:

Q. And for the revenue weighted foreclosure measures, holding all other things equal, if Zuffa increased the number of events it was holding during the year, that would increase its foreclosure share, am I right about that?

A. Well, I have to -- I have to add again a bunch more to the hypothetical to be able to say whether an added event would change the foreclosure share. But I can't answer the hypothetical as you've -- as you've stated it.

Q. Well, for the revenue weighted foreclosure events, holding -- foreclosure measures, holding all other things equal, if Zuffa increased the number of events that earned revenue, its foreclosure share would increase; is that correct?

A. I would need to add more -- more layers to the hypothetical. So I guess I would say I can't -- I just can't

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answer that question.

Q. Well, what would be a reason that, assuming Zuffa did increase the number of events and all other things were held equal, its foreclosure share would not increase?

MR. CRAMER: Asked and answered. Form.

Go ahead.

THE WITNESS: For example, if -- if that fighter fought pursuant to a non-exclusionary contract in that new event, then that fighter would not make it into the numerator of the -- of the foreclosure share.

BY MR. ISAACSON:

Q. Okay. Any -- any other reasons you can think of?

A. I think you have to specify what's happening to the non-Zuffa events around the time that you're taking the measure. So the mere advent of a Zuffa event doesn't necessarily increase the

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foreclosure shares.

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1 conduct, I'm assuming that in a
2 but-for world these vertical
3 restrictions in the fighter
4 contracts that impose exclusivity
5 and duration of a certain extent
6 would disappear.

7 Now -- with one caveat, and
8 it's important, is that when I go
9 to, say, a 30 percent foreclosure
10 level, so long as a small enough
11 share of Zuffa fighters, given its
12 market share, were fighting
13 pursuant to one of these contracts
14 with 30-month duration or more,
15 you could, you could make that
16 consistent with a but-for
17 foreclosure share of 30 percent.

18 BY MR. ISAACSON:

19 Q. Okay. And in your but-for
20 world -- let me ask you this. What do
21 you mean by the but-for world in this
22 circumstance?

23 A. Well, it is a -- it is a
24 world -- it's a more competitive labor

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1 market, a world with fewer restrictions
2 on labor mobility

3 Q. So in estimating impact and
4 damages, you have estimated the world --
5 you compared the world as it is to a
6 world that would have more competitive --
7 a more competitive labor market for UFC
8 fighters; is that correct?

9 MR. CRAMER: Objection to
10 form.

11 THE WITNESS: My -- my
12 construction of but-for world in
13 this regression model, is -- is
14 envisioning a world in which the
15 restrictions on fighter mobility
16 are lessened sufficiently so as to
17 permit 30, 20 or zero percent
18 foreclosure shares, and there's a
19 lot of ways that you can get
20 there.

21 BY MR. ISAACSON:

22 Q. And by fighter mobility, you
23 mean the ability to work for different
24 promoters; is that right?

8 Q. All right. Now, if I
9 understand your answers earlier today, in
10 estimating damages and impact, you have
11 proposed a world where there would be,
12 depending on the model, a zero,
13 20 percent or 30 percent foreclosure, but
14 in those worlds you're not assuming any
15 specific market share or any specific
16 conduct by Zuffa; is that right?

17 MR. CRAMER: Objection to
18 form, misstates the testimony.

19 THE WITNESS: You put
20 something at the end that's
21 causing me to pause.

22 I did testify earlier that
23 I'm not assuming any particular
24 market share. With respect to the

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1 A. An impediment to mobility or
2 restrictions that preclude you from --
3 from working for rivals or for shopping
4 your contract around or testing your
5 market value.

6 Q. When you say a but-for
7 world -- you've done a comparison of the
8 real world to the but-for world, you've
9 estimated the world -- you compared the
10 world as it is to a world with more
11 mobility in the MMA labor market.

12 A. I think in very broad terms
13 that's what I'm trying to get at. And
14 mathematically the way that I express
15 that is a world in which Zuffa's
16 foreclosure share is 30 percent,
17 20 percent or zero percent.

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10 Q. All right. The -- and I
11 think you told me also this morning that
12 you're not assuming -- in terms of market
13 share in the world with more mobility,
14 your but-for world of zero, 20 percent or
15 30 percent foreclosure, Zuffa could have
16 a very high market share; is that right?

17 A. Absolutely.

18 Q. Right. And could Zuffa have
19 a market share of 90 percent and still
20 have a foreclosure of zero?

21 A. Yes.

22 Q. And you're not predicting
23 what Zuffa's market share would be in a
24 world with zero percent foreclosure?

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1 arrangement.

2 So by construction, if I --
3 if I assume in a but-for world
4 these restraints are removed, then
5 the foreclosure falls. I don't
6 need an econometric proof of that.
7 It -- it just follows from
8 elementary logic.

9 BY MR. ISAACSON:

10 Q. Right. Well, for example,
11 when we looked at Figure 3, you told me
12 things you thought were important, but
13 you didn't have any sort of mathematical
14 analysis to say, here's a clause that
15 relates to a specific foreclosure
16 percentage; is that right?

17 A. That is correct. I think --
18 I did not perform an inquiry as to the
19 causes or drivers historically of a
20 foreclosure share. One could do that.
21 It sounds like there would be another
22 econometric exercise. But the
23 foreclosure share, as I've measured it,
24 is what it is, and it's an explanatory

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1 variable model.

2 Q. Okay. Let's go to paragraph
3 1 of your report.

4 A. Paragraph 1?

5 Q. Yes. Page -- somehow that's
6 page 4 and 5.

7 A. Got it.

8 Q. I'm sorry, paragraph 2.

9 A. Oh, paragraph 2.

10 Q. You see in the middle
11 there's the definition of challenged
12 conduct?

13 "Plaintiffs allege that
14 these actions taken together, the
15 'challenged conduct.'"

16 A. Yes.

17 Q. Okay. And the -- and in
18 paragraph 2 you list three things.

19 "1, Zuffa" -- Zuffa's
20 alleged to have, 1, eliminated potential
21 rival MMA promoters through horizontal
22 acquisitions; 2, deprived potential
23 rivals of key inputs, the fighters
24 themselves, by entering" -- "entering

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1 into allegedly exclusionary contracts
2 with the vast majority of top fighters,
3 and 3, taken other steps to use its
4 alleged dominance to impair potential
5 rivals."

6 And then you've also.
7 Footnoting in footnote 2, the complaint.
8 Though that's -- I'm not clear on whether
9 that's not a footnote to the challenged
10 conduct.

11 MR. CRAMER: No, that's a
12 footnote to the sentence at the
13 top of the page.

14 MR. ISAACSON: Right.
15 BY MR. ISAACSON:

16 Q. So is the challenged conduct
17 a subset of the allegations in the
18 complaint?

19 MR. CRAMER: Objection to
20 form. Foundation.

21 THE WITNESS: I don't think
22 so. I think that when I lay out
23 my understanding of the challenged
24 conduct, I try to -- I try to

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1 trace the conduct that's being
2 challenged in the complaint.

3 BY MR. ISAACSON:

4 Q. Okay. And I'm -- we're
5 going to focus on taken other steps to
6 use its alleged dominance to impair
7 potential rivals, because perhaps you'll
8 agree with me that that lacks
9 specificity, but that's okay for an
10 introduction.

11 A. Exactly.

12 Q. Right, right, right.

13 A. It's made very explicit
14 later on in the draft.

15 Q. And then footnoting to
16 that --

17 A. In the report, sorry.

18 Q. -- at the end of that
19 sentence, it's to part VII A. If I
20 wanted to understand the complete
21 challenged conduct, is that where I would
22 look to?

23 A. I don't think so. Let me
24 look at part 7A. That could be a typo.

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1 Q. It even gets confusing, your
2 Table of Contents doesn't have a 7A.

3 A. Right. So let me --

4 MR. CRAMER: I think it
5 means 2.

6 THE WITNESS: Yeah.

7 MR. ISAACSON: 2A?

8 THE WITNESS: Yeah.

9 MR. CRAMER: There's a

10 section of the report called --

11 under Roman II called Nature of
12 the Challenged Conduct.

13 MR. ISAACSON: That would
14 make more sense, yes.

15 THE WITNESS: You want to
16 strike the V there.

17 BY MR. ISAACSON:

18 Q. All right. So II A is the
19 horizontal conduct?

20 A. Yes.

21 Q. And so is that the item 3 in
22 your paragraph 2, the other -- the other
23 conduct, is it the horizontal conduct?

24 A. No.

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1 Q. Okay. Would it be
2 everything in No. II that's -- would
3 your -- would the -- Roman numeral II,
4 would that section capture the challenged
5 conduct?

6 A. Roman II captures the
7 challenged conduct.

8 Q. Okay. Maybe I just got us
9 another errata.

10 The -- now, the esti- --
11 your challenged conduct includes
12 horizontal conduct and vertical conduct.
13 As I understand it, from what you've said
14 today, that you are not estimating injury
15 or damages from the horizontal conduct;
16 is that right?

17 A. I think I'm not -- I'm not
18 estimating any -- any impact or damages
19 that flow entirely through the
20 horizontal. What -- what's important and
21 what drives the damages and the impact in
22 my models are the vertical restraints.
23 They're doing the -- that is the
24 mechanism of harm that I'm capturing,

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1 that I'm measuring.

2 Q. All right. The -- you are
3 measuring an increase in foreclosure due
4 to the acquisition of rivals by Zuffa; is
5 that right?

6 MR. CRAMER: Asked and
7 answered, form.

8 THE WITNESS: Conditional on
9 Zuffa using exclusive contracts of
10 a sufficient duration, then yes,
11 bringing on more fighters and
12 funneling them through that
13 mechanism is causing foreclosure
14 to go up.

15 In contrast, if Zuffa were
16 not using exclusive contracts of a
17 sufficient duration and made a
18 horizontal acquisition, then by my
19 regression model, at least, there
20 would be no increase in
21 foreclosure share and there would
22 be no anticompetitive effects.

23 In other words, the vertical
24 restrictions on fighter mobility

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1 are doing -- is the only necessary
2 condition, it is doing all the --
3 all the lifting, if you will,
4 according to my model.

5 BY MR. ISAACSON:

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10 BY MR. ISAACSON:

11 Q. Fine. You discuss
12 counter-programming in your report. I
13 can refer you to that, but if you're
14 general familiar with the topic.

15 A. Yes.

16 Q. All right. You are -- am I
17 correct that you are not attributing any
18 increase in foreclosure percentage to
19 counter-programming or would you know?

20 A. I'll give you the same
21 answer I just gave you for the
22 acquisitions. If you strip away the
23 restrictions on the fighter mobility, the
24 exclusive long-term contracts, then the

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1 presence of the counter-programming would
2 not engender higher foreclosure shares
3 according to my model, would not generate
4 the wage effects that -- that my model is
5 showing.

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Q. In general, we'll save time if you tell me whether you have opinions as opposed to what you imagine.

A. Okay.

Q. Or could imagine. I don't mean that as a criticism, I mean that as constructive.

MR. CRAMER: Constructive criticism.

MR. ISAACSON: No, not even that. A constructive way to get through the day.

MR. CRAMER: Advice.

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1 MR. ISAACSON: Yes.
2 BY MR. ISAACSON:

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21 Q. Well, part of what drives
22 the increase in foreclosure share is the
23 increase in Zuffa's market share, right?
24 A. Correct.

1 you have used are consistent with the
2 merger guidelines, but you're not able to
3 say whether they were sufficient to
4 define those markets based on the merger
5 guidelines?

6 MR. CRAMER: Objection to
7 form.

8 THE WITNESS: I don't -- I
9 just don't know what sufficient
10 means in that context.

11 BY MR. ISAACSON:

12 Q. Okay. And when you say
13 they're consistent with the guidelines,
14 what do you mean?

15 A. I think the guidelines tell
16 us, and I even quote the guidelines when
17 it comes to defining input markets, and
18 I'm faithful to the -- to the teachings
19 and to the standards that are articulated
20 in the guidelines.

21 Q. All right. And the output
22 markets that you define -- well, actually
23 let me break it down.

24 There's three -- two input

1 markets and one submarket, and there's a
2 geographic market for each of those,
3 correct?

4 A. Correct.

5 Q. And the geographic market
6 for all three would be North America?

7 A. Yes.

8 Q. Okay. And then you define
9 an output market. Is that an output
10 market that's tied to each input market
11 or is there one output market?

12 A. There's one output market,
13 but it does depend on how you have
14 defined the input market. You may recall
15 that when I -- when I chart, for example,
16 the number of events in the relevant
17 output market, it depends on -- I'm
18 making it as a condition that an event --
19 an MMA event had to feature at least one
20 fighter that belonged to the relevant --
21 to the associated relevant input market.
22 You probably recall --

23 Q. Yes.

24 A. Those charts, 4A, B and C.

1 So -- so the way that I've
2 implemented the output market, it depends
3 on -- on the associated input market.

4 Q. Right. And that's why
5 mathematically I'm trying to understand
6 whether you have three output markets
7 tied -- each one tied to an associated
8 input market or there's one output market
9 tied to the three input markets.

10 A. Again, I like to think of
11 there being one output market and one
12 input market and these are just different
13 ways to measure them.

14 Q. And the -- when you defined
15 the output market, you used revenue
16 weighting; is that right? Oh, no, it's
17 other way around. Never mind.

18 The revenue earned by the
19 output market is the revenue that you use
20 when you do revenue weighting in the
21 input markets, correct?

22 A. It is possible to think of
23 it that way, but when I was finding my
24 weights, my revenue weighting measures

1 of, say, market share or foreclosure
2 share, I wasn't thinking about the fact
3 that those revenues occur in the output
4 market. But that's fair, if that's how
5 you would like to think about it. Of
6 course the -- the output is the
7 production of the event and the revenue
8 is associated with that output.

9 Q. Right. And can you describe
10 to me a situation where a firm would have
11 monopoly (sic) power in the output market
12 based on revenue, and would not have
13 monopsony power in the input market once
14 you use the revenue weighting?

15 MR. CRAMER: Incomplete
16 hypothetical. Talking about this
17 industry or just generally?

18 MR. ISAACSON: Generally.

19 MR. CRAMER: Incomplete
20 hypothetical.

21 THE WITNESS: I don't
22 understand the question because
23 the revenue weighting isn't really
24 affecting my -- my conclusions

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1 with respect to, say, a finding of
2 monopsony power in the input
3 market.

4 BY MR. ISAACSON:

5 Q. Well, you do have findings
6 of monopsony power that do rely on
7 revenue weighting, right?

8 A. I think that under the --
9 under the indirect approach and under
10 only one pass through the indirect
11 approach, I weight fighters by -- by
12 revenues to make an inference about
13 Zuffa's high shares in that relevant
14 input market.

15 Q. Right.

16 A. But as you know, that's only
17 one of many, many approaches that allow
18 me to get to the conclusion of monopsony
19 power.

20 Q. Okay.

21 A. I actually prefer --

22 Q. So let's return --

23 A. Can I finish?

24 Q. I thought you were.

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1 A. I prefer direct evidence
2 generally, and I think that I've -- I
3 offer a slew of evidence that speaks to
4 how you can prove directly that Zuffa
5 exercises monopsony power.

6 Q. I understand that you
7 offered direct and indirect evidence, but
8 I need to ask about them one at a time
9 and we can cover both.

10 A. Okay.

11 Q. So in terms of when you
12 define a market, can you describe to me a
13 situation where if you use revenue
14 weighting in the input market, where
15 the -- a monopoly firm would not
16 necessarily have a monopoly in the input
17 market?

18 MR. CRAMER: Incomplete
19 hypothetical, form.

20 THE WITNESS: I've never
21 given thought to that, and I'd
22 like to think about it and maybe
23 we'll come back. But I don't
24 think I'm prepared to -- to

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1 construct a scenario about how
2 that could occur.

3 BY MR. ISAACSON:

4 Q. All right. The -- and then
5 you've described geographic market for
6 the output market also. And is that also
7 North America?

8 A. Yes.

9 Q. All right. The -- and in
10 terms of your SSNIP analysis -- all
11 right. So did you do -- well, my
12 colleague wants to know so it seems like
13 a good question.

14 A. I'm sure it is.

15 Q. In the out -- in the output
16 market, what is being sold? In the
17 output markets that you have defined.

18 A. Sure. I think that you
19 are -- the production or the product that
20 is being produced are -- is live MMA
21 events and the revenue associated with
22 those events can take the form of gate
23 revenue or pay-per-view. That's from --
24 from the consumer side. Of course,

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1 there's -- there's revenues from the
2 advertiser's side as well.

3 But I hope that answers your
4 question.

5 Q. All right. And does
6 pay-per-view compete with broadcast?

7 MR. CRAMER: Objection to
8 form.

9 THE WITNESS: I did not
10 conduct that inquiry.

11 BY MR. ISAACSON:

12 Q. Do you have an opinion one
13 way or another about that?

14 A. No.

15 Q. All right. With respect to
16 the -- does -- do the live venue events
17 compete with pay-per-view events?

18 A. I don't even understand the
19 question. Many of the pay-per-view
20 events are live.

21 Q. Meaning I watch it on
22 pay-per-view as opposed to go see it
23 live.

24 A. I haven't -- I haven't

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1 studied that and I imagine for someone
2 who lives very far from the venue where
3 the live event is staged, they would not
4 be considered reasonably close
5 substitutes.

6 Q. So for your input markets,
7 what evidence did you take into account
8 to assess customer's likely response to
9 price increase in the SSNIP analysis?
10 And feel free to point me to the sections
11 of your report that --

12 A. Did you mean to say -- I
13 think you just conflated the input
14 markets and customers. Maybe we should
15 start over.

16 Q. Yes, I said price increase
17 rather than wage decrease, but let me
18 just put it this way: What evidence in
19 your report did you take into account to
20 assess the likely response to a SSNIP in
21 the input markets?

22 A. Sure. So there it's the
23 perspective of the fighters not the
24 customers. So I was tripping up over

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1 your --

2 Q. Yes.

3 A. -- injecting customers when
4 we're talking about input markets.

5 So I can take you to the
6 relevant sections, and I will, but of
7 course at high levels, I'm looking at
8 record evidence of -- of what fighters
9 and promoters thought about substitution
10 possibilities as you -- if you were to
11 move away from Zuffa to counteract a
12 hypothetical wage cut.

13 Q. Okay. So the first thing
14 you looked at was record evidence of
15 substitution.

16 A. Or the perception of
17 substitution from the stakeholders, the
18 fighters, the promoters, and I'll just
19 point you, if you --

20 Q. That's -- that's sufficient
21 for -- for item 1.

22 MR. CRAMER: You asked him
23 to look at his report.

24 MR. ISAACSON: I'm going

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1 to --

2 MR. CRAMER: Okay.

3 MR. ISAACSON: I'm not going
4 to ask him to recite all the
5 documentary evidence.

6 BY MR. ISAACSON:

7 Q. And I understand that
8 there's documentary evidence that you're
9 not reciting today.

10 Okay. Other than the record
11 evidence of the -- about sub- --
12 perceptions of substitutability from the
13 stakeholders, what would be other parts
14 of your SSNIP analysis for the input
15 market?

16 A. I would direct you to
17 Section 3A 1 for all of the evidence that
18 I used to inform the construction of the
19 relevant input market.

20 Q. That would be the record
21 evidence that you were referring to?

22 A. Well, record evidence is
23 fairly broad, right, because it
24 encompasses almost everything. But I

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1 will point -- to me the -- what helps to
2 guide me to the findings that I made with
3 respect to the input market was the fact
4 that Zuffa was able to successfully
5 suppress fighter wages, wages either
6 measured by -- by wage share, regression
7 or by knowledge of the fact that wage
8 shares were falling over time from
9 26 percent to 18 percent, yet Zuffa did
10 not suffer sufficient defection so as to
11 render that wage decrease unprofitable.

12 Now, that -- that tells you,
13 as a matter of economics, that a -- that
14 a reasonable starting place for defining
15 the contours of the relevant input market
16 is just the fighters under Zuffa's
17 control. That was the -- the first thing
18 that occurred to me.

19 And once you -- once you
20 start there, you can start looking at
21 record evidence to determine whether
22 additional fighters from -- from rival
23 promotions ought to be included so that
24 you eventually get to the smallest set of

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1 fighters such that a hypothetical
2 monopsonist could profitably exercise
3 monopsony power.

4 Q. All right. And you said
5 that Zuffa was able to successfully
6 suppress fighter wages -- wage share.
7 You were talking only about the share of
8 revenues there, correct?

A. Correct.

[REDACTED]

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BY MR. ISAACSON:

6 Q. All right. But in your --
7 in your hypothetical there you held
8 revenues constant. Did you look at, as
9 part of your analysis of the input market
10 and defining that market, as to whether
11 Zuffa actually suppressed actual wages?

12 MR. CRAMER: Objection to
13 form.

14 BY MR. ISAACSON:

15 Q. As opposed to wage share?

16 MR. CRAMER: Same objection.

17 THE WITNESS: I'm focused on
18 wage share, of course, because
19 it's the right thing to look at
20 from an economic perspective.
21 We're trying to measure
22 exploitation, and the textbooks
23 tell you to do it as a share of
24 marginal revenue product.

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1 BY MR. ISAACSON:

2 Q. So my actual question was --
3 I understand you're focused on that, but
4 my question is, did you look at whether
5 Zuffa actually suppressed actual wages?

6 A. Without controlling for
7 revenues, no. Because it's incorrect to
8 do so.

9 Q. So in performing your SSNIP
10 analysis for the input markets, is it
11 fair to say that you relied on the record
12 evidence about the issue of perceived
13 substitution from the stakeholders along
14 with your observations that when Zuffa
15 suppressed fighter wage shares, there
16 weren't significant defections?

17 A. I think -- I think that
18 encompasses a lot. I also think that
19 Zuffa in its ordinary course of business
20 made use of a FightMetrics (sic)
21 database. I had -- the very first thing
22 I did when I -- when I got this case was
23 I started reading the economic literature
24 on the MMA industry, and almost every

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1 article I read, the FightMetrics (sic)
2 database formed the foundation of their
3 empirical analysis.

4 So I thought that that was a
5 reasonable place to begin to posit what
6 the smallest set of fighters that could
7 be under the control of a hypothetical
8 monopsony would be in order for it to
9 exercise market power.

10 Q. All right. Why did you use
11 the smallest set of fighters not the
12 smallest amount of promoters?

13 A. Well, because we're looking
14 at the input market. The fighters form
15 the elements of the input market. They
16 happen to belong to promoters, but
17 fighters are the elements or the
18 ingredients.

19 But I'm -- if I'm a
20 fighter -- just to make it clear, if I'm
21 a fighter and I'm thinking about
22 substituting, defecting from UFC and
23 going to a rival promotion, I don't care
24 what the name of the promotion is or

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1 look at the perspective of -- of
2 different stakeholders. That's
3 why I didn't limit myself to the
4 perspective of fighters. When you
5 go through those multiple
6 paragraphs in the section, you
7 will see other promoters giving
8 opinions about what they think
9 about -- about rival MMA
10 promotions, what they think about
11 options outside of -- of the MMA.

12 BY MR. ISAACSON:

13 Q. All right. So let's move to
14 your output markets.

15 I'm assuming that for your
16 output markets you relied on the record
17 evidence of the perception of
18 substitutability from the point of view
19 of the stakeholders.

20 MR. CRAMER: Is that a
21 question?

22 BY MR. ISAACSON:

23 Q. Am I correct on that?

24 A. I think that encompasses a

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1 lot, yes.

2 Q. Right.

3 A. And it's a good place --

4 Q. And --

5 A. It would be a good place to
6 begin.

7 Q. And as I understand it, what
8 you -- you also relied on the effect on
9 consumers of an increase in pay-per-view
10 prices.

11 A. This is really important,
12 right? I mean, if -- we're not talking
13 about a not-so hypothetical --

14 Q. We'll go into that in some
15 detail.

16 A. Exercising a profitable
17 price increase, we have a real one, and
18 we need to make an inference about it
19 from an economic perspective.

20 This -- this not so
21 hypothetical monopsonist raised prices
22 and yet saw a revenue increase because
23 the demand that it faced was so lasting.
24 That tells you a lot about constructing a

Page 308

1 relevant output market.

2 Q. Actually, I might have
3 gotten that confused.

4 Was that part of your direct
5 evidence I think?

6 A. It's part of the direct, but
7 I can't help from -- from thinking about
8 direct evidence when I go about
9 constructing my relevant markets.

10 Q. The -- I'll come to this --
11 the direct evidence. In the -- and so we
12 will take as on the record that in
13 constructing your input and output
14 markets, you also considered your direct
15 evidence, okay, so that you don't need to
16 repeat that.

17 A. I can tell you like it,
18 though. So this is the last time I can
19 ever say it in a deposition?

20 Q. No, I'm trying to save you
21 some time.

22 A. Okay.

23 Q. The -- in analyzing the
24 output market other than the record

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1 evidence of substitute -- perceptions of
2 substitutability, did you do anything
3 else in your SSNIP analysis?

4 MR. CRAMER: Objection to
5 form, misstates the testimony.
6 You're excluding one of the things
7 he said he did.

8 MR. ISAACSON: You're doing
9 a lot of speaking objections now.
10 I realize it's getting late in the
11 day but...

12 THE WITNESS: I would just
13 like to look at the sections which
14 go from 115 -- paragraph 115 to
15 119, and see if there's anything
16 outside of the umbrella of record
17 evidence of the perceptions of the
18 relevant stakeholders as to how
19 they would respond to -- how a
20 consumer would respond to a price
21 increase.

22 I'll note that there are a
23 few articles in Forbes, I'm
24 looking at footnote 317, 318 and

Page 310

1 321, that we came to outside of
 2 the record evidence --
 3 BY MR. ISAACSON:
 4 Q. Okay.
 5 A. -- that speak to, for
 6 example, whether wrestling would be
 7 perceived as a -- as a reasonable
 8 substitute from the perspective of
 9 consumers to a live MMA event. I think
 10 that those Forbes articles and the record
 11 evidence and knowledge that Zuffa was
 12 able to profitably impose a price
 13 increase on pay-per-view, all guided me
 14 in reaching the final conclusion as to
 15 the relevant output market.

16 Q. I'm going to have you repeat
 17 that because that was at the end of a
 18 very long answer about what you were
 19 going to look at. Or I'll repeat it to
 20 you.

21 In doing your SSNIP analysis
 22 for the output markets, you relied on
 23 Forbes articles and record evidence that
 24 caused you to conclude that Zuffa would

Page 311

1 be able to profitably impose -- along
 2 with knowledge that Zuffa was profitably
 3 impose a price increase on pay-per-view
 4 to reach your conclusions as to the
 5 relevant output market?

6 A. That's fair.

7 Q. And your direct evidence is
 8 discussed on page 98 -- beginning on page
 9 98.

10 A. Uh-huh.

11 Q. All right. The first item
 12 of direct evidence is the power to
 13 suppress fighter competition below
 14 competitive levels.

15 And you list several items.
 16 Each of those relate to reduced fighter
 17 share; that is, the share of revenues
 18 other than your reference to its
 19 sponsorship tax.

20 Do I understand that right?

21 A. Yes.

22 Q. Okay. The -- and how
 23 significant was the sponsorship tax?

24 MR. CRAMER: Objection to

Page 312

1 form.

2 BY MR. ISAACSON:

3 Q. Can you quantify that tax
 4 for me?

5 A. I'm not sure I'm able to
 6 that quantify the sponsorship tax.

7 Q. Okay. The second type of
 8 direct evidence you talk about is the
 9 direct -- is the evidence to restrict the
 10 supply of fighter services, and you talk
 11 about Zuffa consistently maintains
 12 significantly more fighters under
 13 contract than it could use.

14 Now, when you say
 15 consistently, what years are you
 16 referring to?

17 A. The class period.

18 Q. And so it's your opinion
 19 that consistently throughout the class
 20 period, that Zuffa maintained
 21 significantly more fighters under
 22 contract than it could use?

23 A. Yes.

24 Q. And when you say "than it

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1 could use," do you mean that it was
 2 unable to give those fighters -- give
 3 fights to those fighters?

4 MR. CRAMER: Objection to
 5 form.

6 THE WITNESS: It was unable
 7 to give fights to fighters in a
 8 timely fashion.

9 BY MR. ISAACSON:

10 Q. All right. And when you say
 11 a timely fashion, do -- were they able to
 12 give the fights to the fighters within
 13 the time period of the contract?

14 MR. CRAMER: Objection to
 15 form.

16 THE WITNESS: I'm -- I'm
 17 hesitating because I'm aware of
 18 record evidence suggesting that
 19 Zuffa on occasion would toll the
 20 clock either for real or imagined
 21 injury or --

22 BY MR. ISAACSON:

23 Q. All right. But I'm -- I'm
 24 talking about a fighter who is ready,

Page 314

1 willing and able to fight.

2 A. Yes. I've got record
3 evidence of Zuffa denying that fighter a
4 fight. Yes, I do.

5 Q. Within the time period of
6 the contract?

7 MR. CRAMER: Objection to
8 the form.

9 THE WITNESS: Yes, within
10 the time period of the contract.

11 BY MR. ISAACSON:

12 Q. So that --

13 A. The fighters were
14 complaining that they were having to wait
15 very long times in between fights and
16 they were worried about what that was
17 doing to their careers, and you had --
18 you had Silva complaining that -- that he
19 didn't have enough opportunities to place
20 fighters into fights.

21 So there was a -- there was
22 a problem, and it's a -- it's a
23 convenient problem for a monopsonist, and
24 it's -- it generates anticompetitive

Page 315

1 effects.

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Page 317

11 BY MR. ISAACSON:

12 Q. Yes.

13 A. Yes.

14 Q. Okay. Are you -- can you
15 identify any record evidence of Zuffa
16 breaching any of the agreements with
17 fighters by failing to offer the required
18 number of bouts?

19 MR. CRAMER: Objection, to
20 the extent it calls for a legal
21 conclusion, form.

22 THE WITNESS: Yeah, I wasn't
23 citing episodes of breaches of
24 contracts. I think that what

Page 318

1 Zuffa was doing was -- was likely
2 inside of the letter of the law of
3 the contract, but nevertheless,
4 they were strategically delaying
5 fighters for many reasons,
6 including trying to lock a fighter
7 into the next contract.

8 BY MR. ISAACSON:

9 Q. All right. The -- are you
10 aware of an -- any plaintiff or proposed
11 class member who has alleged that Zuffa
12 failed to -- failed to offer them the
13 number of bouts that were required under
14 a contract within the term of that
15 agreement?

16 MR. CRAMER: Same objection.
17 Objection to form. Objection to
18 the extent it calls for a legal
19 conclusion.

20 THE WITNESS: That's -- by
21 memory, that's not -- that's not
22 how I recall the evidence shaking
23 out. The evidence shakes out in
24 a -- in a different way.

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1 BY MR. ISAACSON:

2 Q. All right. When you say
3 significantly more fighters than it could
4 use, what's the magnitude of fighters
5 that you're talking about?

6 A. Well, there's been a study
7 by -- by some economists looking at -- I
8 think trying to measure just by how much
9 the capacity problem was, but sitting
10 here, I -- I can't tell you how big it
11 was. I can only describe it in
12 qualitative terms.

13 Q. All right. The study -- did
14 you do any -- the study that you're
15 referring to is quoted in your report?

16 A. Yes.

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4 Q. Did you do anything to
5 replicate the work of that study?

6 A. I did not. I did not
7 replicate the work of that study.

8 Q. Okay. And can you give me
9 any magnitude of fighters that -- that we
10 are talking about. 50 fighters, 100
11 fighters in a year?

12 MR. CRAMER: Objection to
13 form.

14 THE WITNESS: I don't have
15 a -- I don't have a precise number
16 for you.

17 BY MR. ISAACSON:

18 Q. When you say significantly
19 more fighters, can you give me a range?

20 A. I don't know if I can
21 denominate it in terms of a range. The
22 mechanism here is denying rivals access
23 to fighters and not being able to deploy
24 those assets in a timely fashion. That's

Page 321

1 the -- that's the mechanism.

2 Q. Right. But when you say in
3 your report that they consistently
4 maintain significantly more fighters
5 under contract than they could use, was
6 that more than ten fighters?

7 A. I believe so, but sitting
8 here, I'm not in a position to give you a
9 quantitative estimate.

10 Q. All right. Would you be
11 able to say whether it was more than 50?

12 A. Sitting here, I don't think
13 I can, but it's conceivable I can do
14 that. If that were an assignment, I
15 could go try to estimate that.

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Q. But as to the -- when you say significantly compared to the total number of Zuffa fighters, would that mean at least 50 or would you not have an opinion on that?

MR. CRAMER: Objection to form.

THE WITNESS: Oh, sitting here today, I can't put a number on it.

BY MR. ISAACSON:

Q. Okay. The -- and in a world with zero percent foreclosure by Zuffa, the fighters who were maintained by Zuffa under contract that they -- you say they could not use, in that world would those fighters still be Zuffa fighters?

Q. In a world -- in a world with -- where Zuffa has zero percent foreclosure, would Zuffa contract with fewer fighters?

A. I think directionally you would see leakage and defective from Zuffa to rivals.

You had asked me earlier if I put an exact market share associated with it and I said no because I -- I can't, but I feel comfortable saying, at least directionally, that in a more competitive world with fewer restrictions on fighter mobility, you would see more mobility. I mean, it's almost -- it's almost tautological.

Q. I think previously you told me that in a world where Zuffa had a zero percent foreclosure, it still could have a market share as high as 90 percent. If that were the case, if it had zero percent foreclosure and a 90 percent market share, would Zuffa be contracting with fewer fighters than it is today?

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A. They may be Zuffa fighters and they may not be. I think -- I think a plausible scenario is those fighters break out when you relax their restrictions and go fight. They want to fight. You know, there's -- Dan White has this notion of rusting. He's got a phrase for it, what happens when a fighter sits around and doesn't get to fight.

I understand that it hurts their -- their careers, it hurts their ability to elevate in the profession when they're sitting around. Not only are they not fighting, but their muscles and the experience of being in a fight, it's hard to replicate in practice, and moreover, you don't get the opportunity to elevate by fighting other ranked fighters.

And you don't earn money. I mean, that's the -- that's the real thing. You don't get paid in this profession unless you fight.

MR. CRAMER: Incomplete hypothetical.

THE WITNESS: I think that it's a complicated -- it's a complicated one. I'd probably have to think about it.

BY MR. ISAACSON:

Q. So to infer the price increase, did you take the amount of revenue for pay-per-view and divide it by the number of units?

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1 A. I think revenue and units
2 were elements of my calculus, yes.

3 Q. All right. You did not look
4 at the actual amounts charged by the
5 cable company for the pay-per-view event?

6 A. I think -- I think I agree
7 with you that in this case I was looking
8 at it from the perspective of Zuffa.

9 Q. All right.

10 A. Which is the relevant
11 perspective to determine whether it was
12 profitable for Zuffa.

13 Q. Well, does the revenue
14 percentage of Zuffa vary even when the
15 pay-per-view price remains the same?

16 MR. CRAMER: Incomplete
17 hypothetical.

18 THE WITNESS: I'm sorry, the
19 revenue percentage of what?
20 BY MR. ISAACSON:

21 Q. So you were looking at Zuffa
22 revenue times pay-per-view units,
23 correct? I mean, divided by pay-per-view
24 units.

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1 A. Correct.

2 Q. Correct. And Zuffa's
3 revenue by pay-per-view would be the
4 revenue share it gets from the cable
5 company?

6 A. Correct.

7 Q. Correct? And is it the case
8 that -- that the revenue share percentage
9 goes up and goes down irrelevant (sic) to
10 the price of the actual pay-per-view?

11 MR. CRAMER: Objection to
12 form.

13 THE WITNESS: And I don't
14 know. I think that it would all
15 depend. I would have to think
16 about it.

17 BY MR. ISAACSON:

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Q. So you're characterizing all of the pay-per-view events as marquee events when you say marquee events?

A. I think that you might be able to find counterexamples, a handful of counterexamples of a pay-per-view that doesn't feature a headliner, but in general it would be really hard to sell it unless it featured a headliner.

Q. Right. And did the -- and if Zuffa -- if a firm decided that it wanted to move marquee events from pay-per-view to broadcast, would you consider that direct evidence of power to restrict supply?

MR. CRAMER: Incomplete hypothetical, form.

THE WITNESS: Well, you're

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asking me to assume something that I understand to be an unprofitable move.

But if -- if your experts can show evidence that these marquee events moved one-for-one from pay-per-view to -- to television, I'd be happy to consider such evidence. But I don't have an opinion on it right now.

Q. Okay.

THE VIDEOGRAPHER: Excuse me, Counsel. We're approaching ten minutes left on the disk.

MR. ISAACSON: I think I'm done.

Give me one minute, but I think I'm about done for the day.

Give us a minute.

MR. CRAMER: Let's go off the record.

THE VIDEOGRAPHER: The time is 4:28 PM. We are going off the

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record.

(Recess.)

THE VIDEOGRAPHER: The time is 4:31 PM. We have been on the record for five hours and 36 minutes.

MR. CRAMER: All right. We have no questions.

MR. ISAACSON: Thanks.

MR. CRAMER: Let's go off the record.

THE VIDEOGRAPHER: All right. The time is 4:31 PM.

This concludes the deposition and this is the end of Disk 3.

(Witness excused.)

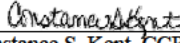
(Deposition concluded at approximately 4:31 PM.)

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CERTIFICATE

I HEREBY CERTIFY that the witness was duly sworn by me and that the deposition is a true record of the testimony given by the witness.

It was requested before completion of the deposition that the witness, HAL J. SINGER, Ph.D., have the opportunity to read and sign the deposition transcript.


Constance S. Kent, CCR, RPR,
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ACKNOWLEDGMENT OF DEPONENT

I, _____, do hereby certify that I have read the foregoing pages, 1 - 337, and that the same is a correct transcription of the answers given by me to the questions therein propounded, except for the corrections or changes in form or substance, if any, noted in the attached Errata Sheet.

HAL J. SINGER, Ph.D. DATE

Subscribed and sworn to before me this _____ day of _____, 20____.
My commission expires: _____

Notary Public

E R R A T A

PAGE LINE CHANGE

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